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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

19 OCT 1988



Mr. Garred Jones
Illinois Department of Transportation
Division of Aeronautics
Capital Airport
Springfield, IL 62764

Dear Mr. Jones:

In accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, we have reviewed the Phase II Environmental Assessment (EA) for the proposed development of Scott Air Force Base, Illinois for joint use by civilian and military aircraft. The project would include development of a new runway 10,000 feet in length and terminal facilities to accommodate airline and commuter passengers. The EA examines four alternative runway configurations and the no action alternative. Three alternatives (1C, 1D, and 2) would provide a new runway 14L/32R parallel to the existing runway at a distance of 6,500 feet, 7,000 feet and 3,750 feet, respectively, northeast from the centerline of the existing runway. Alternative 3 would provide a new runway 5/23 built almost perpendicular to the existing runway, extending to the southwest from a point near the southeast end of the existing runway. The EA recommends Alternative 1D as the preferred alternative.

It is our understanding from a telephone conversation on October 13, 1988 between Jerri Horst of my staff, Mr. Terry Schaddel of the Division of Aeronautics and Mr. Jerry Mork of the Federal Aviation Administration (FAA) that this Phase II EA examines the impacts of the four alternative runway configurations and the no action alternative. A second EA will be prepared in Phase III of the joint use study which will examine in greater detail the impacts and possible mitigation measures for the preferred alternative. It is our understanding that these EA's will not be used by the Federal Aviation Administration, rather they will be used by the Air Force to aid in the preparation of the Draft EIS. The Air Force will be the lead agency on this major Federal action, and the FAA will serve as a cooperating agency. Our Agency supports the Air Force, FAA's and Division of Aeronautics' decision to prepare an EIS for the joint use of this air base due to the significant impacts of this proposal and the public controversy anticipated. We also note that this project is included in the category of projects that the FAA considers as normally requiring preparation of an EIS. An EIS will provide a more detailed analysis of the alternatives considered than an EA.

In general, our concerns relate to the project's potential impacts on noise levels in the surrounding community, wetlands, water quality, and air quality.

Our comments are highlighted below, and detailed comments are enclosed for your consideration. With regard to noise impacts, the EA included a Day-Night Level (Ldn) analysis of noise exposure levels for the existing and future no-action cases and for the four alternative runway configurations. The Ldn analysis provides a good indication of the cumulative sound level which includes an additional ten decibel (db) penalty for each aircraft operation occurring at night. However, the Ldn descriptor calculates the cumulative sound level over a relatively long time period, and thus it is not a good indicator of single event disturbance both during the day and night. Therefore, we recommend that a single event analysis also be undertaken for each alternative using either SEL or Lmax descriptors. The analysis should include a projection of night-time wake-ups. Such an analysis would be beneficial to determine the actual intensity and frequency of disturbances to noise-sensitive land uses.

Measures to mitigate adverse noise impacts should be examined during the environmental process. Such measures might include soundproofing, preferential runway use, use restrictions by noisier aircraft, and modifications to takeoff and landing profiles and power settings or changes in approach and departure paths to avoid noise-sensitive areas. We recommend that the FAA, Division of Aeronautics and the Air Force work with the local communities during the early stages of the planning process to devise strategies to promote compatibility between air base activities and surrounding land uses. A Federal Air Regulations (FAR) Part 150 land use compatibility study should also be undertaken for this project.

As you are aware, the project will require a Section 404 permit under the Clean Water Act for dredge and fill activities within waters of the United States (including wetlands). The Section 404 (b)(1) Guidelines and NEPA require that permit applicants avoid wetlands whenever practicable. After avoidance, on-site minimization of losses to wetlands is required. If wetlands losses still exist after avoidance and minimization have been practiced to the fullest extent possible, then a mitigation plan must be submitted that identifies the specific compensation for loss of wetlands. The EA displays a general location for wetlands replacement located in the headwaters of Ash Creek. Proposed mitigation should preferably occur in the same watershed or drainage area as the wetlands lost. Therefore, we recommend that mitigation for unavoidable losses occur on Silver Creek.

The EA indicated that effective erosion control measures during the construction process will be required. However, the EA does not provide any detailed plans for buffering mechanisms (i.e., sediment and deicing control) on the roadway or airport facility. The EA does state that oil and grease detergent traps will be installed, and that aircraft washing, deicing and related activities will be controlled.

With regard to air quality, the EA acknowledges that the State Implementation Plan (SIP) must accommodate the expected source growth. The EA, however, does not indicate that the State of Illinois has been contacted to confirm that the SIP will accommodate the source growth. Scott Air Force Base is located in the St. Louis Consolidated Metropolitan Statistical Area. This area has been issued a SIP deficiency and a post-1987 SIP call.

We thank you for this opportunity to review the Phase II EA for the joint use of Scott Air Force Base. We would also like the opportunity to review the Phase III EA and EIS for this project when they become available. If you have any questions about our comments, please contact Jerri Horst at (312) 886-4244.

Sincerely yours,

Original signed by:
William D. Franz

William D. Franz, Chief
Environmental Review Branch
Planning and Management Division

c: Mr. Jerry Mork, FAA
Lt. Col. Jack Rochelle, Scott AFB, IL
Mr. Carl Nash, 5AR
Mr. Ken Fenner, 5WQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V COMMENTS
SCOTT AIR FORCE BASE JOINT USE
PHASE 2 ENVIRONMENTAL ASSESSMENT

PROJECT DESCRIPTION

The project proposes joint use of Scott Air Force Base, Illinois for use by civilian and military aircraft. The Environmental Assessment (EA) indicates that civilian air carrier, commuter, and air cargo traffic is forecasted to grow from an initial 14,700 operations in 1990 to 46,000 operations by the year 2005. Military activity is expected to remain near current levels throughout the planning period.

The project would include development of a new runway 10,000 feet in length and terminal facilities to accommodate airline and commuter passengers. The EA examines four alternative runway configurations and the no action alternative. Three alternatives (1C, 1D, and 2) would provide a new runway 14L/32R parallel to the existing runway at a distance of 6,500 feet, 7,000 feet and 3,750 feet, respectively, northeast from the centerline of the existing runway. Alternative 3 would provide a new runway 5/23 built almost perpendicular to the existing runway, extending to the southwest from a point near the southeast end of the existing runway. The EA chooses Alternative 1D as the preferred alternative. In general, our concerns relate to the project's potential impacts on noise in the surrounding community, wetlands, water quality, and air quality.

AIRCRAFT NOISE

A noise analysis was undertaken for existing aircraft activity and future activity for all alternatives including the no-action alternative. The EA indicates that because of projected changes in the civil fleet mix which incorporate more aircraft meeting the quieter Stage 3 criteria, the noise contours for the year 2005 are actually smaller than the contours for the year 1995. Therefore, the 1995 cases were used to compare to the project's impacts to existing noise levels. Shown below is a summary of the results of the Division of Aeronautic's noise analysis. Note that the FAA considers the 65 Ldn and above noise exposure level to be generally incompatible with noise-sensitive land uses.

| | Units located in 65 Ldn or above noise contours | | | | |
|---|---|---|---|---|---|
| | Residences | | | | |
| Alternative | Off-Base | On-Base | Total | Churches | Schools |
| Existing 1987 | 9 | 119 | 128 | 0 | 0 |
| No Action 1995 | 14 | 262 | 276 | 0 | 0 |
| 1C 1995* | 27 | 568 | 595 | 0 | 0 |
| 1D 1995 | 12 | 535 | 547 | 0 | 2 |
| 2 1995* | 27 | 67 | 94 | 0 | 0 |
| 3 1995 | 46 | 706 | 752 | 0 | 0 |

* Alternative 2 requires the relocation of Cardinal Village, on-base housing units. Therefore, the on-base noise impacts of this alternative are less for

this alternative than for any of the others. Both Alternatives 1C and 2 would require the relocation of two schools located to the north of the proposed runway. Soundproofing of these two schools has been recommended for Alternative 1D (the preferred alternative).

The EA did not include all of the input data used in preparation of the noise analysis. We realize that it would be infeasible to include the voluminous amount of input data required for the noise analysis. However, the Division of Aeronautics should clarify whether the approach and departure flight profiles used in the analysis of military aircraft is typical of the profiles actually flown at Scott Air Force Base. It may also be useful to include exhibits of the flight tracks used in the analysis as well the number and type of aircraft utilizing the flight tracks by time of day.

The Day-Night Level (Ldn) noise analysis prepared for this project provides a good indication of the cumulative sound level which includes an additional ten decibel (db) penalty for each aircraft operation occurring at night. However, the Ldn descriptor calculates the cumulative sound level over a relatively long time period, and thus it is not a good indicator of single event disturbance both during the day and night. Therefore, we recommend that a single event analysis be undertaken for each alternative using either SEL or Lmax descriptors. The analysis should include a projection of night-time wake-ups. FAA Order 1050.1D, "Policies and Procedures for Considering Environmental Impacts" also indicates that a single event analysis can be helpful in determining actual noise impacts. This order states that "Any noise impact study will be enhanced by single event analysis. In some situations the single event analysis is absolutely essential to evaluating noise impact." Because of the number of residences located in the vicinity of the project, such an analysis would be beneficial to determine the actual intensity and frequency of disturbances to noise-sensitive land uses.

Page 37 discusses one possible mitigation measure. This measure includes selective use of the new runway for military departures of heavy aircraft and/or those lighter aircraft departing at night and early morning. We recommend that this case be modeled in conjunction with the preparation of the Phase III EA or the EIS to determine the predicted noise exposure area. Other mitigation measures should also be considered. We recommend that any other practicable measures also be modeled. Such measures might include modifications to takeoff and landing profiles and power settings or changes in approach and departure paths to avoid noise-sensitive areas. Such measures may be effective if they can be implemented without compromising safety. Restricting operations by noisier civilian aircraft, such as is being done at airports like Long Beach and John Wayne Airports in California, Boston Logan Airport, and which will soon be implemented at San Francisco International Airport, should also be considered. These airports include programs which either prohibit flights by noisier aircraft or limit flights by noisier aircraft to specified times of the day. Fines are levied against those aircraft not complying with these programs.

We recommend that the FAA, Division of Aeronautics, and Air Force work with the local communities during the early stages of the planning process to devise strategies to promote compatibility between air base activities and

surrounding land uses. We also recommend that a Federal Air Regulations (FAR) Part 150 land use compatibility study be undertaken for this project.

WETLANDS

The EA indicates that Alternative 2 impacts the largest number of acres of wetlands (107 acres). Alternative 1C impacts approximately 100 acres of wetlands, and Alternative 3 impacts the smallest wetlands acreage (13 acres). The EA does not specify the number of total wetlands acreage lost for Alternative 1D, however, the EA states that 30 acres of silver maple, 29 acres of cottonwood and 10 acres of silver maple/green ash wetland will be affected. Total wetland acreage affected under Alternative 1D should be specified. Although Alternative 3 would involve loss of the least acreage of wetlands, the EA also states that approaches to Runway 5 under this alternative would conflict with approaches to St. Louis Downtown Parks and that the crossing patterns required under this alternative would not function as well in congested airspace as would parallel tracks. In addition, the EA also states that Alternatives 1C and 1D are preferable to Alternatives 2 or 3 because they allow better separation of military and civil activity.

The project will require a Section 404 permit under the Clean Water Act for dredge and fill activities within waters of the United States (including wetlands). The Army Corps of Engineers issues these permits, and our Agency reviews individual permit applications. The EA does not include a National Wetlands Inventory (NWI) Map for each of the four alternatives. As a result, the identification of the acreage of wetlands that would be impacted is unclear. A recent aerial photograph and topographic map would be helpful in determining wetland acreages based on the probable error in the NWI mapping in this area. Since the proposed construction area is bottomland hardwood forests, the EPA wetland delineation method might include many bottomland hardwood forested wetlands that may not be identified under the Army Corps of Engineers wetland delineation method. Our Agency can request that the Corps take jurisdiction over bottomland hardwood forests.

The Section 404 (b)(1) Guidelines require that permit applicants avoid wetlands losses whenever practicable. After avoidance, on-site minimization of losses to wetlands is required. If wetlands losses still exist after avoidance and minimization have been practiced to the fullest extent possible, the project sponsor must submit a mitigation plan that identifies the specific compensation for loss of wetlands. Therefore, we recommend that the final environmental document for this project provide an explanation of how the project was evaluated and designed to avoid, minimize and/or compensate for wetland losses.

The EA displays a general location for wetlands replacement located in the headwaters of Ash Creek. Proposed mitigation should preferably occur in the same watershed or drainage area as the wetlands lost. Therefore, we recommend that mitigation occur on Silver Creek. Because of the uncertainty of success of wetland replacement efforts, our mitigation policy requires replacement to occur at a ratio of 1.5:1 acres of wetlands created to wetlands lost. Wetland functions and the wildlife habitat values must be replaced such that the end result is no net loss. To help ensure success in the wetlands mitigation efforts, the mitigation proposal should include a maintenance/monitoring plan.

WATER QUALITY

The plan provides for effective erosion control measures during the construction process. We recommend that the construction contracts for this project include specific erosion control measures to ensure that these measures are implemented. The EA does not provide any detailed plans for buffering mechanisms (i.e., sediment and deicing control) on the roadway or airport facility. However, the EA states that oil and grease detergent traps will be installed, and that aircraft washing, deicing and related activities will be controlled.

AIR QUALITY

The EA states that the emissions of the criteria pollutants or their precursors will increase as the result of the joint operations and most pollutant emissions are expected to exceed 100 tons per year, but are expected to be moderate. Because use of the airport is expected to remain below the limits established by the Federal Aviation Administration for major facility changes, no indirect source analysis for induced ground vehicles changes were performed.

The EA acknowledges that the State Implementation Plan (SIP) must accommodate the expected source growth. The EA, however, does not indicate that the State of Illinois has been contacted to confirm that the SIP will accommodate the source growth. Scott Air Force Base is located in the St. Louis Consolidated Metropolitan Statistical Area. This area has been issued a SIP deficiency notice and a post-1987 SIP call.

The EA indicates that measures will be incorporated into the project design to minimize air quality impacts during construction. We recommend that the specifications for any construction contract include measures to minimize air quality impacts.

COMPATIBILITY WITH THE INSTALLATION RESTORATION PROGRAM (IRP)

The Air Force is now in the process of preparing an IRP Site Assessment Work Plan for Scott Air Force Base. None of the proposed runway locations appear to interfere with existing waste sites and their respective monitoring well locations. However, some of the options for location of the terminal facilities may conflict with the proposed ground water sampling locations for the sludge weathering lagoon site. Due to the quality of the copies of the maps provided, it is difficult to determine the location of the terminal facilities with respect to the lagoon. The locations of Terminal Alternatives IA, IB, IIA, IIB and IIC should be compared on a better quality map to determine if there are any conflicts. The remaining alternatives are located away from the sludge lagoon and other waste sites.